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ABSTRACT

This study examined connections between being a cooperating teacher and professional development, demonstrating that veteran teachers who desire to transform their teaching practices can use their work with student teachers as professional growth opportunities. It discusses how the role of cooperating teacher can affect veteran teachers' practices, why teacher professional development is imperative, and traditional professional development opportunities for teachers. It notes features of effective professional development (e.g., it must engage teachers in concrete tasks of teaching, assessment, observation, and reflection that illuminate the process of learning and development, and it must be collaborative). The paper also discusses how teachers learn and examines the constructed nature of knowledge and beliefs and the situated and social nature of cognition. The study involved 18 cooperating secondary teachers. Data from two hour-long interviews indicated that all respondents believed they were better teachers because of working with student teachers. They felt they were more reflective about their teaching while working with student teachers. Interaction between student teachers and cooperating teachers contributed to knowledge construction. Teachers believed that the opportunity to observe student teachers and their own students provided a valuable perspective on student learning. Being a cooperating teacher promoted collegiality and collaboration. (Contains 30 references.) (SM)

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Cooperating Teachers and Professional Development

Susan Mary Landt

ED 466 799

Is there a connection between serving as a cooperating teacher and professional development for experienced educators? With increasing stress on professional growth for veteran teachers and decreasing confidence in the effectiveness of traditional professional development practices, a search for more successful methods of enhancing veteran teachers' learning has become an important theme in education. Concurrently, there is an increasing need for new teachers to replace retiring veterans and other educators leaving the field as well as a demand for more teachers to fill positions created by the call for lower class sizes. The cooperating teacher's classroom is an arena where these two needs meet: a veteran teacher wanting to improve current practices and an aspiring educator needing assistance and direction. While professional growth is an anticipated aspect for the student teacher, it is seldom an expectation that the veteran educator serving as a cooperating teacher will also benefit professionally. However, if the conditions necessary for teacher learning are an integral part of the cooperating teacher/student teacher relationship, then it is possible that the veteran teacher will also experience professional growth from the encounter.

How does the role of cooperating teacher affect veteran teachers practices?

What might cooperating teachers experience in relation to their own professional development as a result of working with student teachers? Every year scores of experienced educators open their classrooms and their teaching lives to aspiring novices. While the focus of their interaction centers on the neophyte educators acquiring the necessary expertise to become accomplished teachers, the exchange of knowledge and understanding is not entirely one way.

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Veteran teachers, taking on the role of cooperating teacher, often describe how their own practices improve as a result of working with student teachers (Clinard, Ariav, Beeson, Minor, & Dwyer, 1995; Ganser & Wham, 1998; Tatel, 1994). However, while teachers report professional growth from serving as a cooperating teacher, there is little research on this topic and, consequently, no official recognition of it as an avenue for professional development.

The objective of this research is to demonstrate that veteran teachers, with the desire to transform their teaching practices, can use their work with student teachers as a professional growth opportunity. A secondary purpose relates to the impending changes in teacher certification and the requirement that teachers become actively involved in designing individual professional growth plans. I hope to add information from this research that will help to establish the role of cooperating teacher as a recognized professional development activity for veteran teachers to include in their professional growth agendas.

Verifying that veteran teachers can benefit professionally from their work with aspiring educators will legitimize the cooperating teacher role as an authentic avenue for educators who want to improve their teaching and position the role in a different - more professional - light. Establishing a link between serving as a cooperating teacher and teacher learning, validates the previously unrecognized and consequently untapped position as an area of professional development for veteran teachers. Once the role of cooperating teacher is acknowledged as an authentic professional growth opportunity, it can be recognized for the critical place it holds in the teacher learning system and garner the support – administrative and financial – that so often is lacking for this voluntary and under-appreciated responsibility.

Why professional development for teachers is imperative

> In virtually every state in the country, reform efforts are dramatically raising expectations for students, and consequently, for teachers. In response to these

> reform initiatives, educators are asked to master new skills and responsibilities and to change their practice. (Corcoran, 1995)

Today's educators face increasing challenges as they respond to escalating expectations of higher standards for all students and changing conditions within society. Improving schools to provide quality education for all students has captured the nation's attention, generating reform strategies from national goals to school-based initiatives. The objective that "every school in America will ensure that all students learn to use their minds well, so that they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy" (National Education Goals 2000) is indicative of the tenor of the nation.

School reform and greater student success depend on the continued improvement of teaching. As Sykes (1996) indicates, "While other reforms may be needed, better learning for more children ultimately relies on teachers" (p. 464). After reviewing studies on student achievement, Hawley and Rosenholtz (1984) conclude, "There is an enormous amount of evidence that teachers have a significant impact on efforts to change schools and on the nature of students' experience" (p. 128). The conviction that student achievement is contingent on teacher quality is reiterated by Sparks (2000) who points out, "A body of research shows that improving teacher knowledge and teaching skills is essential to raising student performance. . . . What teachers know and can do directly affects the quality of student learning" (¶ 4).

Learning new teaching strategies and subsequently putting them into practice can be daunting endeavors for teachers. Therefore, effective professional development that does more than merely present information but also incorporates a component intended to assist teachers in implementing innovations is fundamental if the expectation that all students will succeed to higher standards is to be met. As Sparks (2000) notes, "In the absence of substantial professional development and training, many teachers naturally gravitate to the familiar methods they

remember from their own years as students" (¶ 2). Consequently, according to Sparks, "student achievement has remained stagnant, even as society's expectations for graduates rose" (¶ 2).

As Lieberman and Miller (1999) note, "Teachers engaged in reform are involved in two enormous projects. They are reinventing school, and they are reinventing themselves. The social realities they face are very different from those they have come to know and understand in the past" (p. 19). The task of "reinventing themselves" as teachers in order to adapt to the changing conditions and expectations in the field of education is complex and continuous, almost Sisyphean in nature. Grimmett and Neufeld (1994) note that teachers' "work context is constantly in a state of flux and subject to competing emphases" within which "teachers search for conditions in which to develop as professional educators" (p. 3). Given the changing conditions and expectations inherent in the field of education, opportunities for teachers to develop professionally and grow as educators are imperative. As Loucks-Horsley states,."We need more teachers who are well prepared to teach more challenging standards and who can help all students learn; the cry for more and better professional development is unanimous" (1999) The question does not seem to be whether professional development for teachers is necessary; rather, the question is centered on the type of learning experiences that will be most valuable for teachers.

Traditional professional development opportunities for teachers

> It is unrealistic to expect that teachers will learn how to incorporate complicated practices into their repertories on the basis of a few short highly general workshops conducted after school in the school auditorium by someone who doesn't know their field, their students, or their classroom contexts, and whom they are unlikely to ever see again. (Darling-Hammond, 1999, p. 32)

The above statement by Darling-Hammond epitomizes the attitude of many educators toward past professional development offerings. There appears to be a general consensus regarding the inadequacies of traditional professional development opportunities to provide

practicing educators with the type of learning experiences required to meet today's objective of helping all students achieve high standards. Smylie (1997) notes, "Professional development, as generally practiced, has a terrible reputation among scholars, policy makers, and educators alike as being pedagogically unsound, economically inefficient, and of little value to teachers" (p. 36.). While Lieberman insists, "The conventional view of staff development as a transferable package of knowledge to be distributed to teachers in bite-sized pieces needs radical rethinking" (1995, p. 642). Traditional professional development activities – administrative run in-service, one-shot workshops and one-size fits all seminars – consist of an "incoherent and cobbled-together nonsystem" (Wilson & Berne, 1999). Defined by external agents and based on the teaching as transfer model, these offerings are often divorced from the context of teachers' work and devoid of content meaningful to teachers' present needs (Lieberman, 1995; Little, 1993; Sykes, 1996).

Indicative of the negative evaluation of traditional professional development programs is the way Schwarz and Alberts (1998) introduce their work on teacher lore and professional development.

> In the last 25 years we have been subjected to an almost complete preoccupation with technique, procedure, and behavior: teacher groups assigned to write behavioral objectives; experts holding forth with little idea as to what life is like in any real school; cute but quickly forgotten workshops; lectures offering prescriptions for 'effective teaching'; talks by generic 'motivational speakers'; and research results from those who know nothing of our subjects, our schools, or our students. (p. Xii)

This plethora of negative judgments colors the concept of professional development for teachers. Rather than dismiss all professional development activities as ineffective and time-wasting, it is more productive to look at recommendations for what constitutes effective professional development.

Old patterns and new visions

Given the above agreement concerning the necessity for educators to continue to develop their knowledge and teaching skills and the apparent consensus regarding the improbability that past professional development offerings will be able to provide the needed learning opportunities, it is imperative that we look toward new visions for professional development for teachers. The need for teachers to continue learning in order to be effective educators is not in dispute. What is a topic of debate concerns the means and ends of continued teacher learning. Little (1993) contends that the complexity of changing conditions in education today requires more than the traditional skill development model of training. She maintains that what is needed is an "opportunity to learn (and investigate, experiment, consult, or evaluate) embedded in the routine organization of teachers' work-day and work year" (Little, 1993, p. 133). In their review of research on professional development and teacher learning, Wilson and Berne (1999) describe how current thinking involves teacher learning not as a package of information to be delivered to teachers, but as the activation of teachers' understanding of their teaching knowledge and how they affect students' learning (p. 194).

Lieberman and Miller (1999) note that a new model for professional development is needed that is based on growth in practice and considers teaching as intellectual work and learning something that occurs when teachers are able to reflect on theory and practice in the context of their work. Lieberman (1994) prefers the expression "teacher development" rather than professional development in order to emphasize the fact that teachers are involved in a continuous process of learning. She contends that teacher development induces a vision of teachers as "reflective practitioners" continuously learning and growing through inquiry into their own practices. Lieberman also perceives teacher development as a collaborative process where teachers learn from and with their peers. Focusing on professional development as a

mechanism for learning where teachers are active agents within a community of colleagues changes the perspective from something that is done to and for teachers to a dynamic flexible process with teachers at the center. As Smylie points out, "Theories of adult learning . . . have long been consistent in their perspective that teachers learn best when they are active in their own learning and when their opportunities to learn are focused on concrete tasks of day-to-day work with students" (1997, p.36).

Features of effective professional development

> A teacher's development, like development in others, is a complex and ongoing process of personal and contextual interpretation . . .. There are no universal truths about which specific conditions or factors facilitate or constrain a teacher's development because development is individually, not universally, defined. (Cole, 1992, p.377)

Cole's statement expresses the belief that professional development should be an individualistic process whereby teachers determine their own path to growth. While this stance has merit, it is important, however, not to follow the swing of the pendulum from a narrow definition of professional development where everything is district controlled and administratively delivered to one where any activity involving teachers is classified as professional development. Therefore, it will be helpful to look at a few of the principal proposals regarding professional development criteria in order to construct a definition to guide future professional development.

Visions of what effective professional development should look like abound, often complete with an inventory of characteristics essential for successful programs of teacher growth. Darling-Hammond (1995) advocates for the following five attributes as indispensable for an effective professional development program.

It must engage teachers in concrete tasks of teaching, assessment, observation, and reflection that illuminate the process of learning and development.

It must be grounded in inquiry, reflection, and experimentation that are participant driven.

It must be collaborative, involving a sharing of knowledge among educators and a focus on teachers' communities of practice rather than on individual teachers.

It must be connected to and derived from teachers' work with their students. It must be sustained, ongoing, intensive, and supported by modeling, coaching, and the collective solving of specific problems of practice.

It must be connected to other aspects of school change. (p. 97)

In Darling-Hammond's vision described above, professional development grows out of the context of teachers' work and necessitates that teachers be active agents of change, not merely within the confines of their own classrooms, but within the larger situation of the educational community. It involves teachers in reflective inquiry concerning their own practices and the process of learning. Rather than coming from a self-contained workshop or stand-alone in-service, professional development, according to Darling-Hammond, is an ongoing process requiring long-term engagement with both theory and practice related to educational reform.

Other versions of what constitutes effective professional development encompass many of the same features with slightly different emphasis. Little (1993) proposes six principles against which to scrutinize professional development programs. According to Little, good professional development

Offers meaningful intellectual, social, and emotional engagement with ideas, with materials, and with colleagues both in and out of teaching.

Takes explicit account of the contexts of teaching and the experience of teachers.

Offers support for informed dissent.

Places classroom practice in the larger contexts of school practice and the educational careers of children.

Prepares teachers to employ the techniques and perspectives of inquiry.

Ensures bureaucratic restraint and a balance between the interests of individuals and the interests of institutions. (pp. 138-139)

The same features that are central in Darling-Hammond's vision can be found in Little's proposal. Teachers need to be actively engaged in inquiry with colleagues about ideas and practices. Both the context of the classroom and the greater contexts of school and the institution of education must be significant factors in an approach to teachers' professional growth if it is to be effective.

By incorporating the essential features of the above visions of effective professional development, I constructed the following working definition:

Professional development is an ongoing process where participants are actively involved with investigating ideas and practices that fit the conditions of their specific situations while also expanding their comprehension of the larger contexts of school and society. It is a process of inquiry that includes opportunities to acquire and practice innovative pedagogy, reflect on and share experiences, as well as collaborate with colleagues.

This definition is aligned with the fourth proposition of the National Board for Professional Teaching Standards that requires teachers to "think systematically about their practice and learn from experiences." It encompasses the three critical factors that, according to Diez and Blackwell (1999), are at the heart of teacher growth: reflection on practice, systematic inquiry into practice, and collaboration with others in meeting learners' needs.

How do teachers learn?

Understanding the current needs in professional development for educators is only a piece of the whole. In order to understand the potentially symbiotic relationship between cooperating teachers and student teachers, it is helpful to consider the process of learning from the standpoint of teaching. How do teachers learn? Darling-Hammond and McLaughlin explain that, "Teachers learn by doing, reading, and reflecting (just as students do); by collaborating with other teachers; by looking closely at students and their work; and by sharing what they see" (1995, p. 599).

Learning how to be an effective teacher is no different from acquiring other complex skills and abilities. It involves long-term development whereby learners build on the knowledge and understanding they bring with them as they incorporate new information and unfamiliar perceptions into their worldview. In accord with this perspective, Putnam and Borko (1997) assert that "Virtually all current learning theories view learners as active constructors of knowledge who make sense of the world and learn by interpreting events through their existing knowledge and beliefs" (p. 1227). This paradigm falls into a constructivist perspective and is pertinent to the theory that experienced educators learn from the role of cooperating teacher. Therefore, it is appropriate to examine, at least briefly, some of the basic tenets of constructivism and to look at how the concept relates to teacher learning generally and professional growth of cooperating teachers specifically.

Constructed nature of knowledge and beliefs

According to constructivist theory, teachers, like all other learners, must make sense out of new information through the knowledge and beliefs they already hold for "constructivism is a learning or meaning-making theory. It suggests that individuals create their own new understandings, based upon the interaction of what they already know and believe, and the

phenomena or ideas with which they come into contact" (Richardson, 1997, p.3) Knowledge development and change occur, according to constructivist perspective, when an environment is disrupted and individuals react to changes in their circumstances. A change in belief or action is driven, however, not from the outside influence, but from the interaction of the individual with the disruption. While disruptions affect knowledge development, they do not produce such development, for learning is actively and internally created by the learner.

This is specifically applicable to teacher learning in that veteran teachers bring with them an extensive background related to education that influences how they comprehend and connect with new teaching-related concepts. Veteran teachers have a depth of knowledge about teaching and an assortment of practical skills acquired during their teaching tenure that they bring to the learning role. Fledgling teachers, full of questions and qualms, enter a cooperating teacher's classroom with fresh perspectives: They disrupt the equilibrium by their very presence. The challenges they pose and the questions they bring create an atmosphere ripe for exploration of new ideas and divergent concepts.

Cooperating teachers, no longer isolated behind classroom doors, share their space and their teaching practices with novice educators. The daily presence of another adult intensely interested in every aspect of the cooperating teacher's day interrupts the routine and creates spaces for learning to occur. As experienced educators encounter new ideas brought in by student teachers, respond to novice educators' queries regarding their practices, observe their students from a different perspective, and grapple with alternative theories about education and teaching, they enjoy a rich opportunity for the construction of knowledge. Cooperating teachers who recognize the perspectives and innovations of student teachers for the learning experiences they can be and who incorporate the best of these ideas into their own teaching become better practitioners as a result of their service.

The situated nature of cognition

According to constructivist theory, the context within which learning takes place affects what is learned, how the learner acquires knowledge, and how that knowledge is interpreted and used in the future. Leinhardt expresses this view when he notes that; "Much of the knowledge teachers have about teaching is situated within the context of teaching" (1988, p. 147).

The importance of the contextual nature of learning applies directly to the role of cooperating teacher as everything takes place within the veteran teacher's own workplace rather than an area divorced from the realities of teaching. The classroom, filled with active, questioning students, is the arena on which the dyad of student teacher/cooperating teacher meets. Decisions affecting real students and situations are discussed and made within the context of each school day. There are significant changes in the context of the cooperating teachers' worlds when student teachers enter their classrooms and their lives. They no longer inhabit an environment bereft of other adults. Their position as sole instructor shifts to that of guide as they experience the teaching process from the perspective of knowledgeable observer and mentor.

The social nature of cognition

According to constructivism, the process of learning is not isolated within the individual but involves contact with the social and cultural environment. Interaction among members of communities influences not only what is validated as knowledge but also shape "the very way a person thinks or reasons"(Putnam & Borko, 1997). Learning is social in nature and is facilitated through discourse and interaction with others. In a study on teacher learning, Willis and Harcombe (1998) conclude that dialogue, both internal and external, is critical for understanding. Referring to the process of reflection they stress, "Reflection without articulation is often impotent. Articulating new understanding, in either written or oral form, forces the organization

and refinement of thought while encouraging further thinking through feedback from others" (p. 311).

Implications for teacher learning include the necessity for regular exchange of ideas among educational practitioners. Smylie (1995), reviewing the literature on adult learning and change in relationship to teacher learning in the workplace, concludes that one of the most significant factors involves opportunities for teachers to "work with and learn from others on an ongoing basis" (p. 103). He also points out "Learning may be enhanced through exposure to a variety of other individuals, particularly those with different knowledge and experiences" (p. 103). Opportunities for teachers to work with and learn from one another are generally infrequent. This is partly due to the way schools are structured with individual teachers working parallel to one another but seldom crossing paths and to the time constraints most teachers experience because of a heavy teaching workload and other school-wide responsibilities.

Darling-Hammond, commenting on professional development opportunities for teachers, stated that they

> Must embrace a range of opportunities that allow teachers to share what they know and what they want to learn and to connect their learning to the contexts of their teaching . . . they must allow teachers to engage actively in cooperative experiences that are sustained over time and to reflect on the process as well as on the content of what they are learning (1995, p. 5).

This is contrary to what is generally found in most teaching situations. An acknowledged aspect of most teachers' working situations is isolation from their colleagues with few opportunities for teachers to engage in professional exchange. This is particularly true at the secondary level where the opportunity for contact with peers is severely restricted by the structure of the school day. There are few opportunities for teachers to exchange ideas, share concerns, or receive feedback as they go through a daily routine of teaching back-to-back classes in the privacy of their rooms. An important opportunity for teacher learning is lost without an

avenue for teachers to cooperate as colleagues in improving their practice. Grimmett and MacKinnon share an example of valuable learning experiences through the development of a community that included student teachers, experienced teachers, and professors teaching alongside one another. They note that "all the participants . . . learned a great deal about teaching at one another's elbows" (p. 436).

The social nature of cognition thus speaks to the role of cooperating teacher. Student teachers, by their mere presence in the classroom and the resulting interruption in the veteran teachers' isolation, can be a stimulus to growth. The questions they bring and the demands they make on cooperating teachers' time and expertise may provoke veteran teachers' renewed reflection on their teaching practices and induce construction of knowledge within the veteran educator. Having another individual to share experiences and exchange ideas encourages reflection and stimulates learning. Research on the experience of becoming a science teacher produced this discovery:

> The experienced teachers in our group actually found it easier to unpack their own knowledge and understanding in the context of working with a novice teacher[1]. This situation often required them to make explicit both the procedures and actions they engaged in (Erickson & MacKinnon, 1991, p. 18).

In another study examining the cooperating-teacher/student-teacher dyad, the cooperating teacher, sharing her description of the experience, presented a slightly different perspective,

> We found ourselves looking at issues I had not examined as carefully in other years. Looking closely was easier when I had someone with whom to view the problem. Sometimes, just seeing the problem through someone else's eyes gave clarity (Nettesheim, 1993, p. 133).

Viewing the student-teacher/cooperating-teacher relationship from this perspective reveals it to potentially be one of reciprocity where learning is socially and culturally situated (Jenlick & Kinnucan-Welsch, 1999). Moreover, the interaction between novice and veteran helps

[1] In this instance novice is referring to a student teacher.

to fill the gap created by the way schools organize teachers' time and teaching responsibilities and creates a conduit for sharing and an avenue for mutual learning.

Method

Eighteen cooperating teachers completed this study: all served as cooperating teachers to at least one student from the Reformed Secondary Education Program. The participants taught in a variety of academic areas: English, math, science, social studies and foreign language. The number of years in teaching ranged from 5 to 35. The participating teachers were evenly divided between middle schools and high schools, with all but two of the schools residing in the same school district.

I conducted two hour-long in-depth interviews with each participant: one at the beginning of the 2000-2001 school year and a follow-up session toward the middle of the second semester. The interview protocol was similar for all first interviews. The second round of interviews primarily focused on questions of clarification concerning information from the first interview, additional questions on points mentioned during the first interview, and a general question concerning professional development and the role of cooperating teacher.

Three questions drove this study:

- Do cooperating teachers practices change as a result of working with a student teacher?
- Does the role of cooperating teacher stimulate veteran teachers' reflection on their teaching practices?
- What are the processes that affect veteran teachers' practices when they take on the role of cooperating teacher?

Do cooperating teachers' practices change as a result of working with student teachers?

The answer to this question resides in the testimony of the teachers as they describe a variety of changes made in what they teach or in the way they teach. Virtually all eighteen teachers who completed this study agreed that they are better teachers in some manner because of their work with student teachers. Each of the participants reported changes made to their practice that they attribute to their role as cooperating teacher. The type and intensity of the change varied as did the teachers' responses: the majority of teachers provided in-depth details about specific transformations while a few teachers conveyed only general statements concerning changes in their teaching.

Because I am interested in changes in teachers' practices related only to their work with student teachers, analysis of this aspect of the research required searching for two connecting parts: evidence that cooperating teachers made changes in how they approach instruction and explanations correlating the decision to make the change to their work with student teachers. Examples of changes in practice may take many forms; teachers may describe modifications to their teaching that affect the entire class or share examples of situations that target only one or two pupils.

The criteria that I applied relates to the reason for the change rather than the change itself. This means that I looked for not only ideas or techniques brought in by student teachers, but that I considered how the dynamics of having a student teacher affects cooperating teachers' perspective and beliefs about teaching and learning. Thus, a cooperating teacher may decide to alter a teaching practice not because of an innovative proposal shared by a student teacher but because of questions or concerns that occurred while having a student teacher in the classroom. A determination that a change in teaching practices is due to working with a student teacher was

made only if the cooperating teacher credited the presence of the student teacher as the impetus for or a critical factor in such change. For example, a teacher might have described a decision to alter a practice as stemming from an idea introduced by a student teacher, as a result of questions asked by a student teacher, or as a consequence of a problem encountered while helping a student teacher. The fundamental factor is the way the cooperating teacher describes the process of change that occurred.

A change made in a teacher's practice because of factors not related to having a student teacher - for example an increase in class size, an alteration in the make up of class diversity – was not considered as pertinent to this study unless the resultant modification is directly attributed to input from or assistance of a student teacher. I am cautiously optimistic that I was able to distinguish between increased professional growth as a consequence of working with a student teacher and professional growth as a result of factors independent of working with a student teacher because I required teachers to explain their reasoning processes related to any reported changes in their practices. By asking teachers to describe the ways in which they feel they have grown professionally from their role as cooperating teachers, I directed their responses to only those areas related to the student teacher/cooperating teacher relationship.

Following are examples from teachers of specific ways that they altered their practice as a result of working with student teachers. These particular instances were chosen because they illustrate the variety of ways that teachers' practices were affected through their interaction with student teachers.

Helping students relate: Factory versus castle

Alma Wren, teaching science to middle school students, used a factory analogy to help students understand and remember the parts and functions of the cell. "Where you have the cell wall you've got the factory fence and all the different parts have their different jobs in a factory

and all the different parts have their jobs in a cell." She was satisfied with this lesson until a student teacher came in with "some new ideas of different ways to make that analogy and one of them was a castle, with the knights on guard and the castle walls and the moat." Alma was pleased with how well the students responded to the new analogy. Their reaction caused her to consider her own teaching. As she observed,

> A fresh approach to that same thing made me realize that I'd been sort of stuck in some areas. Although she also had an analogy, and so did I, hers was a fresh analogy and it was, the kids really got into the activity. They really understood all the parts of the cell and they really can relate it to the parts of a castle now.

Alma's story provides an example of how cooperating teachers can be nudged into reconsidering teaching practices when they encounter new, more successful ideas brought in by student teachers. Although Alma considered her original lesson plans using the analogy of a factory to be effective, observing her students responding to the student teachers' analogy of a castle motivated Alma to reconsider the way she presented this lesson.

Challenging students

Tammy Darvin, a middle school teacher, described what she learned about her students when a student teacher began to ask more from them than Tammy thought they were capable of comprehending. She explained that she learned to challenge her students and expect more in-depth thinking from them because of watching her student teacher interact with the students.

> The other thing he offered which was really good was, sort of "over their heads thinking." It was amazing, I said, "oh, they will never get this," and they did. Not everybody, but they got more than I expected. . . . He asked them a question in relationship to our law unit. "What is right for me?" write me a paragraph on "what is right for me?" … And he got paragraphs. Some kids wrote a page. And he didn't tell them anything more than, "what is right for me?" … I was, "wow, that is an interesting question."

Tammy admitted that she probably had been underestimating the ability of some of her students to do more abstract thinking. After observing how the students responded when her

student teacher challenged them, she resolved to ask more from them with some of their assignments. During the second interview, when asked if she was carrying out her resolution, she responded, "I think I'm really pushing it a little bit more this year." Then she explained how she has changed her expectations for the papers the students are writing. Rather than telling them how to write a conclusion, she is asking them to demonstrate their ability to put things together and come up with their own conclusion.

> I try to encourage them to see that I expect them to think about what they're saying. I expect them to think about, "is this support?" and I expect them to change the assertion if it doesn't fit with the support. I said to the class and individually when kids would come up, "what do you think? You watched the videos from *The Eyes on the Prize*. We studied it, we discussed it, in the very end, what do you think?" I got remarkably good answers.

Tammy credited this change in what she expects from her students directly to the student teacher's willingness to seek more from her students than she previously thought them capable of giving. The student teacher's perspective on student learning and students' ability to perform in-depth thinking, motivated Tammy to challenge her students to go beyond perfunctory understanding of the material. She feels that this makes her a better teacher because her students are demonstrating greater comprehension of concepts now that she is encouraging them to examine issues more thoroughly.

How do you say that? Lesson refinement

Kay Knox, a foreign language teacher, shared a strategy on helping students drill, which she learned from a student teacher a few years ago. She started by explaining that she used to do practice drills with her students where she asked the questions and the students responded. She was not happy with this strategy because, "If the teacher guides the drill, there will be one student responding at a time; unless it is done in chorus, and then you won't be able to hear anyway if it is correct."

Wanting to find a method where more students were engaged in the drill simultaneously, Kay was intrigued by a drill exercise brought in by a student teacher where students worked in pairs. She explained the advantages of this method. "If you do it in pairs, half of the kids are speaking at any given time. So half of the kids will always be having speaking practice and the other half are listening and can correct." Kay described how she and the student teacher worked on the strategy.

> We developed an activity where we would give each of the students a card and on one side there was a question or a problem. On the other side in very small print, was the answer. They would form two lines facing each other. Each student would hold the bold side out with the problem on it and the other student would have to respond. The person listening had the answer on the back so they could listen and correct. Then they traded cards and one of the lines moved one to the right. . . I've had a lot of kids say to me that it is one of the most helpful drills.

Kay continued, demonstrating that the new ideas teachers acquire as cooperating teachers are more than merely new ways to present old lessons, but ideas that they see as benefiting student learning and therefore, worth including in their repertoire of teaching strategies.

> Its got the advantage of keeping kids on their feet for one thing so they can't fall asleep (laughing) and they are forced to participate because nobody moves until they do. They participate so that they don't get the whole class on their case.

For Kay, the new method of drilling with students was an improvement on what she was doing. It provided an avenue for all students to be involved in the exercise, which was an important goal for Kay. The student teacher brought in the new method and worked with Kay on its refinement until they were both satisfied with student participation and the effect on student learning.

Each of these narratives is an example of how teachers made changes to their regular teaching practices as a direct result of having a student teacher. In these instances, the student teachers were actively instrumental in the curricular or instructional changes: bringing in new ideas, demonstrating different strategies, suggesting modifications to current lessons. These are

not the only ways that teachers' practices changed as a consequence of their role of cooperating teacher. As will be demonstrated in subsequent sections, the presence of student teachers and the responsibility that cooperating teachers have to help the aspiring educators develop into full-fledged teachers, affects teachers' practices in a myriad of ways. I chose the above cases because they were straightforward illustrations of the student teachers' influence on their cooperating teachers' practice. Later, I will explicate other ways that student teacher/cooperating teacher interaction affects teaching practices.

Does the role of cooperating teacher stimulate veteran teachers' reflection on their teaching practices?

Discerning that teachers' practices change as a consequence of working with a student teacher is only the beginning. The above illustrations provide examples of some of the ways teachers' practices developed because of their contact with and responsibilities to student teachers. The next step is to clarify the reasoning behind teachers' decisions to alter their practices because the professional growth of teachers involves more than making cursory adjustments to teaching techniques: professional growth involves reflection on the effect of teaching practices on student learning.

That reflection is an important aspect of student teacher/cooperating teacher dynamics is apparent from the many references cooperating teachers made regarding reflection because of working with a student teacher. Before analyzing some of the most specific examples of reflection, I will share a few of the teachers' comments concerning reflection, their practices and student teachers

Reflection was a theme woven into the responses of the participants. Fran Page, an experienced middle school educator, conveys a sentiment expressed by a number of teachers concerning how the presence of student teachers seemed to stimulate reflection.

> You become much more reflective. . . . Put another person in your classroom and have to explain why you did what you did and have to help them answer why they did what they did, and compare notes. "How are we going to approach the next unit? What do we want to focus on? What are our objectives?" you become very reflective and much more in-depth in your teaching. You really lay out, what we are trying to do first and how we are going to do it second.

Later in the interview, Fran continued to discuss reflection when she was describing what she talks about with student teachers. She pointed out that they discuss the profession of teaching. When asked what she meant by that she replied, "What is teaching? What are we doing? Why are we doing it? How are we doing it?"

Reflecting with a student teacher is something that Nancy, a veteran high school teacher, believes is vital. She describes how she and her student teacher were constantly discussing new and better ways to help students learn.

> I know it was the hardest that I had thought in a long time about really what my purpose was and why I was doing it. Was I a person that was there to facilitate or was I there as a person to, I don't want to say dictate, but I think that's kind of what I'm getting at, more for her (meaning her student teacher) and for the kids.

When asked what caused her to think so hard, she responded,

> To try to get it right so it would work for the kids, because I wanted them to be able to learn as much as they could. And every time we would fall into the dictatorship, the kids didn't learn. Neither she nor I felt good about our lessons when that happened . . . So, I kept thinking real hard on how I could make myself into a better facilitator. . . . A lot of huge ideas started really hitting me: How does math really need to be taught for everyone to learn? What was nice is it was a goal of hers too that she had been developing in college: How can we get all kids to learn, not just the elite group? What can we do? Is it the teaching style? Is it the curriculum? We really ended up thinking hard, the two of us, that it was probably more the teaching style than it was the curriculum.

Lloyd Jacobson, who has been a cooperating teacher for countless student teachers, commented that it gives him, "an opportunity to reflect upon why I'm doing what I'm doing rather than just get up there and do. I should have reasons for what I'm doing." He expanded on this with,

> I think as they observe me and as we talk, it causes me to look at myself in retrospect. . . . Or it causes me, if I'm standing around and I want to say something to a student teacher, it makes me even do a self analysis of what I'm doing so that I can say, "this is why I did what I did."

The stories shared so far illustrate that cooperating teachers believe that they are more reflective about their teaching while working with a student teacher. They also suggest that cooperating teachers feel that their practices improve because of the increased reflection. Next, I will look more closely at accounts of reflection and transformation as a part of the cooperating teacher role.

How will I recognize reflection when I see it?

In order to ascertain whether reflection was indeed a part of veteran teachers' experiences while working with student teachers, I drew on Osterman and Kottkamp's theory of reflective practice because it most closely represents what I expected to find regarding cooperating teachers' thinking and because it offers sufficient flexibility in applying it to a multiplicity of situations. I subjected the data generated from the interviews to the experiential learning cycle developed by Osterman and Kottkamp (1993), seeking examples of each of the four stages: concrete experience, observation & analysis, abstract reconceptualization, active experiment. Keeping in mind the non-linearity of the process and the possible backward and forward movement among the stages, I was not looking for a smooth cyclic progression but rather evidence of the stages growing out of the interaction between cooperating teacher and student teacher. The process may start with observation and analysis as the cooperating teacher evaluates a student teacher's lesson plan. It may begin when either the cooperating teacher or the student teacher, concerned about a specific teaching situation or problem, offers an innovative solution. It may be initiated when a student teacher and a cooperating teacher decide to try a new idea or

teaching technique together. How the experiential learning cycle commences is not important, uncovering examples of the stages in the interviews is the goal of this step in analysis.

I did not expect to find each stage in all accounts and I only made a determination of reflection when a cooperating teacher described the three stages of – concrete experience, observation and analysis and abstract reconceptualization. Active experiment may not occur until after the student teacher has moved on and the cooperating teacher once more has charge of the classroom, therefore, during the first interview I inquired about future plans and revisited the discussion of active experiment in the course of the second interview.

Nancy Hargraves

Nancy, a high school math teacher, shares an approach to teaching a math concept generated when she and her student teacher, Cheryl Petrusky, tackled a problem together. Nancy began by relating how working with another teacher affects her teaching.

> It made me a better teacher because she was doing activities that I would have done. Where if I was sitting in front of the room I didn't have a chance to really analyze what was going on in the classroom. Where she could run the activity and I could sit there and really analyze it and think about what the kids were understanding and why they were understanding that. And what did that question bring out? And why did that question not work? That's the kind of stuff that helped me more because I could really see what I was trying to do and see what worked and what didn't and then I could make changes that way because I had the time to.
>
> Then we discussed together why things worked. Just having another person there, to generate ideas, I mean, that is one of the things that as a teacher right now, we don't have any time to get together with the other teachers in the school and discuss things. Where here I had her right in there every minute and we could discuss everything along the way. Why are we doing this? What's the purpose? What are we going to get out of it? You know that kind of stuff and that's the stuff that I really learned.

When asked to provide a specific example of a lesson that she felt was improved because of being able to work in a team with a student teacher this way, she responded with the following.

> Well, I think one of the examples was working with the distributive property and with factoring polynomials, because we were trying together to come up with some way to present it so that the kids would understand it and not memorize a rule. We were trying to think of someway we could tie it to something that they already knew. And we both had agreed that area and volume was something that they already knew. So how could we tie this idea to that?
>
> So, we worked and we put together a little activity where we gave them some lengths and some widths. We started out with just whole numbers like 5 x 4 and asked, "What is the area of that rectangle?" and went from there. Then we started giving them some unknowns and gradually we evolved that, with them still tying it to an application that they knew. And out of that, it made sense to them and instead of giving them a rule; they created their own rules. And we got about 4 different ones and it was just really powerful.
>
> Together we put together the activity and then she taught it and I could sit back and watch what was happening and watch what questions were happening. Then at the end of the day we actually sat down and said okay, "what worked and what didn't work?" and then we went from there. The next day we changed the questioning and got more and more things out.

Nancy's story epitomizes an ideal situation where cooperating teacher and student teacher work together as a genuine team. Nancy entrusted her student teacher's opinions of student learning with the same confidence she had in her own. Although they were veteran and novice, Nancy understood that she has as much to learn from the situation as her young colleague.

In using the phases of the experiential learning cycle to analyze Nancy's description of the interaction between herself and her student teacher, it is apparent that concrete experience occurs when Nancy and Cheryl recognized that students were memorizing rules rather than understanding mathematical concepts. Nancy was able to see this happening as she observed Cheryl teaching and was able to watch students struggle with understanding concepts.

Observation and analysis occurred as Nancy and Sheryl observed one another working with the students, discussed what they felt the students knew and were comfortable with and contemplated possible ways to build on the students existing knowledge.

Out of this came their theory of using students' familiarity with area and volume to help them discover mathematical concepts on their own; an instance of abstract reconceptualization.

The final phase, active experiment, was a joint project with Nancy and Sheryl taking turns teaching and observing. At the end of each day's lesson, they revisited their teaching strategy and made changes based on how the students seemed to be learning: a continual loop of the above phases. Nancy and Cheryl exemplify an ideal student teacher/cooperating teacher dyadic pair. After the initial adjustments two people have to make when working closely together, they found a way to use one another's strengths to build on their own practices.

Carol Turner

During both of her interviews, Carol discussed how working with a student teacher has helped her avoid becoming stale in her teaching. She explained that when she has a student teacher it forces her to "look at why I am doing that activity, or what is the purpose of it? What are the kids getting out of it?" She maintained that student teachers contribute to the profession and "keep that profession growing in all different directions and my learning and teaching growing in all different directions." Student teachers, Carol asserted, bring in new ideas and ways of looking at teaching and learning. It was a student teacher, she pointed out, who encouraged her to use more hands-on activities with her students. She described how she and a student teacher brainstormed together to develop and fine-tune a variety of activities. After trying a new activity, Carol explained,

> We would reflect back and think, how do we think that one went? Was everyone on task? Did they seem to understand what they needed to do? Did they seem to maintain the information? Were they learning it? Applying it? Is it something that met our goal? Was the net result what we wanted?

If the lesson was not as successful as they hoped they asked themselves questions such as, "What did the kids do that we didn't want them to do? How could we avoid that? What might

be something that we could instruct them in the beginning that would get them to do what we wanted them to do?"

For a specific example, Carol shared how, with the assistance of a student teacher, she began "moving away from quizzes and moving into projects where the first two or three days we work on skill development and then the project is meant to pull together those skills into something that's content based and hands-on."

Explaining why she chose to move to project based assessments, Carol affirmed that with projects the students are

> more intrinsically motivated to stay with the language, working with it, talking about it, playing around with it, than, "I have to get this piece of work done because, you know that's what has to be done, that's what the assignment is". Its not like they can just rush through a drill or do a piece of worksheet or something.

She continued to explain that:

> I've also learned based on what I've seen in projects, that the kids who do really well with projects and those who do really well with testing are very similar. What it does do is it motivates your C level student to try to do a better job. It also motivates your student who gets the occasional D or F who didn't review the night before but might have done better, doesn't get anything lower than a C because they've had to put in more energy during class time. And I think it's a better assessment as to what they really know versus what they crammed in one night and spit out on the paper the next day.

During the second interview, when we returned to the question of doing projects and developing rubrics in order to assess them, Carol expounded on her original answer.

> It would help students to figure out what was an A, B, C, or D paper or project or activity or whatever else they did. Because I think kids who perform poorly don't know what it takes to perform well and if we identified what we considered a poor project versus what we considered an excellent project they would understand very clearly what it took to get an A and what it took to get a D. Consequently we had by far more A's and B's. It almost eliminated the C.

Developing rubrics for assessing the projects was an important aspect related to working with her student teacher. Carol reiterated the importance of the student teacher bringing the latest

information from the university and acknowledged the student teacher's importance with this statement:

> I think by having a student teacher to work with me on designing rubrics and validating that this is what they are supposed to be doing through the university and then experimenting with alternative ways of assessment has let me feel bold enough to go that direction and be kind of out there with project based assessment and assigning some sort of a grade to it.
>
> I had already started using rubrics but I wanted to do more of them. And I said, "here's what my overall plan is, I would like to put more rubrics in our program. How do you feel about that? Where is your teacher training on this?" and she's like "oh, they are just gung-ho on rubrics." I said great, this is what I need to do and this can be part of your project as well and we can do it together.
>
> So basically, we were of the same mind and we overhauled parts of the curriculum and implemented rubrics wherever we could and she would put it in and I would go over it and kind of check for a few things here and there. We'd run it though with a group and then say, "Okay, how did it work? What did we get, what didn't we get? What was a surprise? What was an added bonus? What would we like to change for next time?" Then we changed it right away. Her job was to change it within the week and not just let it sit there. That way if she wanted to do that activity again it was ready to go with the corrections.

Carol's decision to move away from quizzes and tests and embrace project-based assessments using rubrics to aid in evaluation is a compelling example of Osterman and Kottkamp's Experiential Cycle (1993). Concrete experience does not consist of a single instance of dissonance, rather it is a concurrence of Carol's growing conviction that projects can offer a more authentic means of assessment juxtaposed with the presence of a student teacher whose training supported Carol's belief.

Observation and analysis occurred as Carol and her student teacher critiqued the activities and assessments they planned and implemented asking one another key questions: "How did it work? What did we get, what didn't we get? What was a surprise? What was an added bonus? What would we like to change for next time?"

Abstract reconceptualization was an ongoing affair as they assessed the success of each lesson based on student learning, adjusting, refining, and transforming activities and rubrics to prepare for the next lesson.

Active experiment was a vital part of the cycle established early in their relationship as they learned from each lesson and prepared to apply the new knowledge on the next lesson. This began the cycle all over again as they used the new lesson as a starting point for further observation and analysis.

What are the processes that affect veteran teachers' practices when they take on the role of cooperating teacher?

Recognizing that professional growth can occur when veteran teachers work with student teachers is only part of the picture. The subsequent question is how the role of cooperating teacher can be a catalyst for professional growth for veteran teachers. Not all cooperating teachers experience professional growth, nor does every match of student teacher and cooperating teacher result in development for the experienced educator. Merely placing a student teacher in a veteran teachers room does not automatically stimulate professional growth for the veteran. What then is going on in the instances where veteran teachers' practices improve? What are the mechanisms that inspire veteran teachers to make changes in their own practices? The answers to these questions can provide a platform on which to build a structure for facilitating cooperating teachers' professional growth.

This brings us back to the lens of constructivism, whereby the process of knowledge construction is initiated through interaction with others, with self and with the social environment. As evidenced by the previous illustrations, interaction between cooperating teachers and student teachers does seem to contribute to knowledge construction. That reveals merely a gross picture and does little to uncover the specific underlying causes. What is it about

having a student teacher in the classroom that seems to stimulate learning by the cooperating teacher? What are the situations and interactions that engender cooperating teachers' growth? With that as a goal, I analyzed the interview material, looking for clues to the specific triggering mechanisms that appear to stimulate knowledge construction by cooperating teachers.

Observation

In searching for clues within cooperating teachers' testimony about their experiences, several patterns emerged. One of the most significant categories involves observation both of and by the student teacher. The following two sections explicate teachers' statements concerning how observation was fundamental to their professional growth

Teachers reported that the opportunity to observe, not just the student teacher, but also their own students, provided them with a valuable perspective on student learning. A fundamental element of the role of cooperating teacher involves observing student teachers teaching. According to teachers in this study, observing while student teachers have primary responsibility for a class can be a powerful learning opportunity for the cooperating teacher. Participants report that they are able to watch, not only what the student teacher is doing, but also the response and reactions of the young students in the class. From such experiences, cooperating teachers explain, they frequently discover things about teaching and student learning that they would not have learned while teaching alone.

By removing themselves from the intensity of being the teacher and observing as their students respond, or do not respond, to another educator, cooperating teachers gain a broader perspective of the learning situation within the classroom. As Opal Grover stated, "I can get a better dynamic of a class by observing it rather than teaching it." Fran explained it this way,

> By having someone else teaching and getting to observe them teach, I get to be almost omniscient. I know what the teacher is going to say, I know what the outcomes are going to be, the only part I don't know is how the kids are going to

> react to it. I can leave that body presenting it and I can see it from the other side. And because I know the students, . . . I know the questions they are asking and I can see what they are asking and why they are asking it.

Being able to stand back and see the entire situation is sometimes a stimulus to change: many teachers in the study reported making modifications in their teaching practices as a result of what they discovered while observing. Several teachers indicated that they changed some of their teaching strategies to make them more active for the students after discovering how quickly students became disengaged when not actively participating. Tammy Darvin explained that she uses a different method for calling on students as a result of observing a student teacher elicit answers from students she previously thought would not respond. A high school teacher shared how she adjusted her approach to a lesson after watching a student teacher following her instructions and observing the students' reactions. "I could see the frustration on the other class, they wanted to hear and they wanted to see and they couldn't."

Other teachers reported that they used the opportunity to be observed by the student teacher as a way to get feedback for their own teaching. A few teachers explained that they asked their student teachers to observe specific actions, such as how they called on different students or the pattern of interaction between student and teacher. Some noted that they become much more aware of their teaching practices when they have a student teacher observing. According to Opal Grover,

> If somebody's observing me then I want to do it the best I can and so I take a lot of time with my lessons. I make sure that I've thought about the order of doing things and the purpose of it each time and if I can't explain it, I don't do it. So, it makes me refine lessons each year.

Lloyd Jacobson describes how he uses student teachers to provide feedback while he is teaching by asking them about the clarity of his lessons.

> When I get all done and I say to them, "Did I come across clearly?" I have somebody who's at a position that is above the level of what the student is who

> then can say, "yeah, that sounded pretty good." I love having cooperating teachers or the supervising teachers come in and watch me, because then they critique me also. And I like that feedback.

Observing another educator teaching or being observed while teaching are both situations encompassing the potential for growth for cooperating teachers. Participants explained that the increased concentration on their own practice because of being observed by aspiring educators causes them to reflect on the decisions they make concerning what and how they teach and interact with their students. Their neophyte colleagues also provide perspectives of student learning that cooperating teachers are not able to discern while attending to full-class lessons. Being the observer permits cooperating teachers to view student learning from a different perspective and exposes both positive and negative teaching strategies. These benefits could be part of any situation where two professional educators worked together. However, this semester-long teaching situation is unique to the cooperating teacher/student teacher dyad.

Collegiality and collaboration

Teachers generally work in isolation from their peers; seldom are there opportunities to teach with a colleague. Having a student teacher violates this isolation and introduces the possibility of collaboration. A middle school teacher observed: "The student teacher is experiencing exactly what I am experiencing. … So, it's like sharing with somebody who is in the trench right next to you." Teachers in this study shared numerous ways they improved their practices because of being able to work with a colleague—albeit a neophyte. Some teachers used this opportunity to implement methods they had learned at workshops or seminars, but had not put into practice. Dave Schmidt described two activities he began using at the impetus of his student teacher: a protein synthesis simulation and a genetics activity. Dave was familiar with both of these strategies from workshops, but had not yet managed to work them into his lesson

plans: having a student teacher served as a stimulus to incorporate these new ideas into his teaching.

For many of the teachers in this study, having an extra person in the classroom provided the help necessary to make a transition to project-based or group learning activities. Ellena Randolph described how she began incorporating more group work into her lessons because of her student teacher. She explained that it was "Not because of what she brought in, but because of being able to do it and then learning how to do it better when there were more people in the room. Now I can handle the groups on my own if need be." This was a frequent response from teachers. They used the presence of the student teacher to implement activities that are difficult and time consuming to set up alone at first, but that they can continue to use after the student teacher is gone because the initial work has been completed.

A few cooperating teachers reported developing real partnerships with their student teachers, where they worked together on improving lessons. Nancy Hargraves and her student teacher took turns, one would teach while the other observed, trading off each period after discussing the lesson and making needed changes. Other teachers reported using the same routine as a way for both student teacher and cooperating teacher to experience a lesson from the perspective of both teacher and observer. By doing this, they were able to make modifications in the lesson, try them the next period while the other observed, and continue to refine their teaching.

Working as a team proved helpful in realizing significant transformations for some teachers. One teacher described how she was able to give up relying on a textbook, another reported incorporating authentic assessment activities, a middle school teacher explained how he began including group work, while a high school teacher indicated she transformed her teaching

to be much more student centered because of having a student teacher to help her develop the needed changes.

One of the participants articulated it this way:

> Any idea, scientific or otherwise, has to be bounced, has to be discussed, has to be shared with someone in order to be formulated completely. Because you can't see the holes in your own thinking, you need to share with someone else. And the other thing is, you need to have those holes filled in some way. Somebody else's sharing makes you go, "Oh, yeah, that is where I was going." Practices and thoughts need to be shared in order to make them complete.

In all of these cases, veteran teachers acknowledged that their teaching improved as a consequence of having another teacher to work with as a partner. In some cases, the student teacher served as an inspiration for trying new ideas a cooperating teacher had been reluctant to attempt alone; at other times the student teacher functioned as a colleague to brainstorm and problem solve with while developing or refining teaching strategies. The collegial interaction between student teacher and cooperating teacher was, for many, a catalyst that enhanced professional growth for the cooperating teacher.

Teaching about teaching

This mechanism of professional growth is derived from the necessity to become a teacher to a neophyte educator. The belief that the best way to learn something is to teach it to others is demonstrated by the growth cooperating teachers report because of their responsibilities to shepherd student teachers through their initial teaching experiences. Cooperating teachers described how the need to explain the art of teaching to student teachers requires that they scrutinize their own teaching practices, frequently causing them to reassess and reform aspects of their teaching, which, they assert, results in their becoming better teachers.

When asked how being a cooperating teacher affects her own practice, Carol Turner responded:

> It's like hearing about it, watching it and doing it are all different things. If you read about teaching it's one thing, if you teach, that's another thing. But if you're teaching another person how to teach, that's the ultimate way of fine-tuning your own teaching, your own learning about teaching. . . . it forces you to examine what you do and why. You can read about it, you can study it, you can do it, but you don't really learn the art of teaching unless you are actually teaching someone else.

Several teachers attributed their growth as educators to having to explain the craft of teaching to aspiring educators because it compels them to pay more attention to decisions they make in their own practice. One teacher stressed that the necessity to clarify her teaching to a student teacher prevented her from stagnating and prompted her to make conscious improvements in her teaching. The need to model good teaching behavior was a stimulus for many teachers to become more organized, to analyze why they make the teaching decisions that they do, and to hone their practices in order to better demonstrate effective teaching methods. Sally Enders explained it this way:

> It takes everything that I do in my head and puts it out on the table. And it forces me to analyze how I teach, why I teach. Because every step along the way I would explain why I do what I do. I think it really helped me evaluate my teaching. It took it out of my head and it made me look at it and analyze it.

As these teachers affirm, the role of cooperating teacher requires that veteran teachers explain the craft of teaching to the neophyte. This frequently generates reflection on their own practices. Peggy Fowler sums it up best when she succinctly states, "By being a cooperating teacher you are a teacher. You can only hone and perfect your job by doing it."

Connections to the university

A fourth component in professional growth of teachers who take on the role of cooperating teacher is the importance of the connection to the university that the student teachers present. The ideas and strategies the student teachers bring with them are viewed by many cooperating teachers, not simply as alternate methods, but as the latest research from the

university. Several teachers clearly stated that they enjoy working with student teachers because of how it connects them to the university and provides them with information on important research in their field of teaching.

Perhaps Julie Lindlow stated it most directly when she shared that she always looks for ideas from her student teachers, "I'll always say, 'what are you working on in college right now?' It's my way of learning from college without going back." As an example, Julie pointed to a unit on plants she modified in order to include the concept of multiple intelligences she learned from her student teacher. Another teacher indicated that she began using rubrics with the assistance of her student teacher because "she was learning how to do that in her methods class the same time and that helped to reaffirm and add validity to what I was doing in the classroom."

The idea that their teaching decisions are in align with what is going on at the university was mentioned by a number of teachers as an important aspect of having a student teacher.

> They bring in some new focuses, new perspectives that I've forgotten about, or I never knew about. There are always buzzwords going around in each of the different curricular areas and they hear them all over there. . . . I still get to be connected to all those new ways and methods and ideas that are being promoted through the professors at the university. I still get to hear them because they bring them to me. That's the best thing about having a student teacher, realistically; it's that connection to the professors and the ideas coming out of the university.

Veteran teachers look to the lesson plans and teaching strategies that student teachers bring with them as ways to learn about the latest research from the university. They are more likely to incorporate these new approaches or curriculum ideas into their own teaching because they appreciate that what the students bring with them is fresh from their university training. This is a critical aspect of the student teacher/cooperating teacher relationship because it explains why teachers with decades in the classroom will look to a student teacher's ideas as potential material for their own practices.

Summary

These four categories encompass the majority of teachers' responses concerning how the role of cooperating teacher influenced their practice. The testimony of these teachers stands witness to the professional growth potential inherent in the cooperating teacher role, while revealing some specific means through which that growth is facilitated. What their narratives show is that cooperating teachers tend to improve their practices as a direct result of the responsibilities of being a cooperating teacher:

Observing while student teachers conduct lessons

Modeling good teaching practices for neophyte educators

Working closely with student teachers as they develop their skills

Explaining their own practices to inquiring novices

Listening to student teachers talk about what they are leaning at the university

Helping them carry out innovative methods

With this information, it is possible to re-assess the role of cooperating teacher from the perspective of professional growth of the veteran educator, looking for ways to facilitate the processes that stimulate such growth. Teachers who open their classrooms and their teaching lives to aspiring educators are performing a service to the educational community: They are also, in many instances, refining their own teaching practices.

This research did two things: demonstrated that cooperating teachers do make thoughtful changes in their practices as a result of working with student teachers and revealed patterns within the role of cooperating teacher that seem to stimulate professional growth of educators interested in improving their practice. Understanding the dynamics of the situation that motivated cooperating teachers to transform their practices is important in order to provide

support and assistance for such development. The next step involves searching for strategies that facilitate the processes that stimulate the professional growth of cooperating teachers.

There are several inferences concerning how to facilitate professional growth of cooperating teachers that can be made from the results of this study.

- Teachers should be informed of the potential for professional growth inherent in the role.
- Teachers should be encouraged to make a commitment to focus on their own growth while working with a student teacher.
- There should be some form of evidence of professional growth as a consequence of undertaking the role of cooperating teacher that can be included in the teacher's professional portfolio.
- Cooperating teachers should have the support and assistance from the school's administration as well as university representatives.

If the role of cooperating teacher is recognized as a potential growth opportunity for veteran educators, if cooperating teachers are encouraged to focus on their own practice while working with a student teacher, and if sufficient support is provided to help them achieve their goals, then the role of cooperating teacher can be a viable choice for teachers interested in professional development.

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